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29 June 1981

Worldwide Report

ENVIRONMENTAL QUALITY

No. 312

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UN AGENCY REPORTS ON STATUS OF ENVIRONMENT

OW050809 Beijing XINHUA in English 0715 GMT 5 Jun 81

[Text] Geneva, 4 Jun (XINHUA)--The old phrase "prevention is better than cure" is finding its new meaning in environmental protection, according to the "1981 State of the World Environmental Report" delivered here to mark the "World Environment Day" on June 5.

In his report, the United Nations Environment Program's (UNEP) executive director Mustafa Tolba noted that the pollution damage in developed countries costs about 3 to 5 percent of the gross national product, while environmental protection costs only 1 to 2 percent of GNP. Only 0.5 to 1 percent of GNP is needed by developing countries if their environmental budgets mainly go to improving drinking water supplies and sanitation, the director said. Another example: If a barrel of oil is spilled in the sea, the cleaning up of oil-spills costs 1,000 dollars per barrel spilled.

"Prevention is the only available option," urges the report. Therefore, various countries in the world should allocate adequate finances for environmental protection. If the systems of safe drinking water and sewage should be constructed in the Third World, the report says, the incidence of diseases like typhoid, dysentery, cholera and schistosomiasis could be halved. The report warns against the irresponsible disposal of wastes and stands for governing the use of chemicals and for effective controls to prevent the pollution and over-use of underground water supplies, which account for over 90 percent of the safe fresh water available to man.

The report also warns against the spraying of toxic chemicals on food crops and the use of thousands of man-made chemical compounds. The report estimates air pollution in the Soviet Union costs the country $38 per person per year while the cost of air pollution damage in the United States every year is at least two billion dollars.

CSO: 5000

INDUSTRIAL GROWTH THREATENS LIFE IN BOMBAY

Bangkok BANGKOK POST in English 8 May 81 p 8

[Article by Prakash Chandra]

[Text] **BOMBAY (Depthnews)**

IS Bombay a dying city?

Yes, says Dr Rashmi Mayur, a noted Indian environmentalist, in a recent paper. He predicts that Bombay will be plunged into chaos and decay even before the year 2000.

But Bombay is not the only Indian "miseropolis" facing imminent death. New Delhi, Madras and Bangalore are three others in the same predicament unless prompt and immediate action is taken, Dr Mayur warns.

With a population of more than eight million, Bombay is considered one of the world's fastest growing cities. Comparable cities abroad are Mexico with a five per cent annual growth rate, Cairo and Caracas.

According to Dr Mayur, Bombay will be one of the world's 15 "gargantuan megalopolises" in the next 20 years. All these cities are facing the grim prospects of a breakdown in institutions and services, turbulence and possibly even anarchy.

In his paper, Dr Mayur gives a detailed analysis of the problems confronting Bombay. To begin with, at least 500,000 people have arrived in Bombay during the last one year without jobs, dwelling houses and proper sanitation facilities. The result is large-scale illegal constructions throughout the city.

Apart from this senseless expansion of illegal buildings, Dr Mayur points out that Bombay has been invaded by an uncontrolled industrial expansion.

He said the Bombay Metropolitan Regional Development Authority was set up to bring rational growth to the city through planned industrial growth.

But major industrial houses have managed to beat these guidelines and are in for major expansion. Dr Mayur says even the state-owned gaint factory, Rashtriya Chemical Fertilisers, has launched its fourth and fifth expansion plans. It is rapidly polluting the city.

Another example is of the Tatas who are building a 500-megawatt thermal plant in nearby Trombay. Another plant, the sixth in the series, generating 500 megawatts, is also to be built there.

The Municipal Corporation of Bombay says that the Tatas have not "clarified" their plans for future expansion.

Another state-owned petro-chemical industry, the Bharat Petroleum, is planning to erect a plant which will produce a wide range of chemicals using naphtha from Bombay High.

Union Carbide, Calico Chemicals and several other big firms have massive expansion plans until 1990. And it is estimated that in the next 20 years the total industrial investment will triple.

POLLUTION

The result will be an enormous pollution of air and water in Bombay, apart from causing major congestion and worsening the already bad housing situation.

Dr Mayur argues in his paper that most people in Bombay breathe poison. He says: "The air pollution in the city has reached such an alarming level that we are not far from the London disaster of December 1952 when 4,000 deaths occurred due to air pollution.

"The northerly calm winds carry massive industrial pollution all over the city, and as soon as the sun sets, the cool moist air settles pollutants over the entire metropolitan area. Consequently, from the late night until the early morning millions of people are smothered under a pall of smog, dirt and poison. Despite all the talks, plans and promises about the pollution control, the situation has never been more serious before."

Dr Mayur points out that 1,500 tons of pollutants like hydro-carbons and other poisonous gases are dumped into the Bombay environment daily. According to reports, if 343 tons of sulphur dioxide are released in the atmosphere, then most of it pollute the atmosphere in the neighbouring districts.

The average level of sulphur dioxide in the city is thrice the standard level acceptable by the US Environmental Protection Agency, says Dr Mayur.

People living in Bombay suffer more from respiratory diseases than in other Indian cities. According to a recent count, the percentages are higher for Bombay than any other city in the country.

Asthma, for example, accounts for 12 per cent; bronchitis, 9 per cent; cough and colds, 20 per cent; headache, 12 per cent; eye troubles, 15 per cent and skin diseases, 9 per cent.

But what is even worse is that Bombay has been hit by a higher incidence of cancer, which is two-and-a-half times the average for other cities.

Dr Mayur asks the question whether there is any hope for Bombay. He told "The Hindu" newspaper: "True, Bombay is dying; so was Berlin after World War II when 80 per cent of the city was in ruins. Today, Berlin has been rebuilt as one of the most decent, civilised and beautiful cities of the world.

"Bombay can do it and do it better. It all depends on the political will, concern and dedication of the citizens inhabiting this great metropolis."

But he warns that unless the Government launches an effective programme, Bombay will be turned into a sick and crumbling ghetto much larger and more decayed than even Calcutta.

CSO: 5000/7051

MALAYSIA

HIGH LEVELS OF DDT FOUND IN HUMAN BLOOD

Kuala Belait BORNEO BULLETIN in English 18 Apr 81 pp 24, 25

[Excerpts]

THE ACCOMPANYING story describes how the Consumer Association of Sarawak (the CAS) is trying to protect the public from dishonest businessmen (for which the CAS needs, above all, the support of the public).

Some of the issues the Sibu branch of CAS has been concerned with during recent months are the sale of poorly labelled cooking oil, the misuse of pesticides and the high cost of oil (not the cooking kind, but that used in cars and machines).

As for the problem of pesticides, the branch has publicised its support for the Ministry of Agriculture and Community Development, which intends registering chemicals used in agriculture.

Most of these chemicals are poisonous and used to kill either weeds (herbicides) or insect pests (insecticides).

But while these chemicals help farmers to grow more, they can have damaging side-effects as well.

Small amounts of the poisons can stick to food which is later eaten, and rain can wash them into the streams which provide our drinking water.

That these poisons ARE reaching Malaysians as well as weeds and insects was proved in a study by Mr Wong Kien Keong of the University of Agriculture near Kuala Lumpur.

Mr Wong found the powerful insecticide DDT could be detected in the blood of Malaysians.

The average level of DDT is about six times that found in Americans (the United States does not permit the use of DDT without a special license that is difficult to get).

Padi farmers, who use DDT the most, have an average blood level of DDT almost double that of non-farmers.

For another pesticide ingredient (known as "cyclochiene"), the levels in the blood of Malaysians are on the average 14 times the level found in the blood of Americans.

While this study was done in Peninsular Malaysia, similar results could be expected in East Malaysia.

CSO: 5000/8017

EMPHASIS ON PREVENTING INDUSTRIAL POLLUTION

Kuala Lumpur BUSINESS TIMES in English 25 Apr 81 p 12

[Text] INDUSTRIES in Malaysia are putting more emphasis on prevention rather than just curing pollution after it occurs.

The director of water pollution control in the Division of Environment, Mr A. Maheswaran, said this approach would eliminate the causes of pollution and avoid spending money and other resources on cleaning up afterwards.

"It also means learning to create productive resources from pollution," he said. The advantages are evident when one considers the natural resources, money and manpower consumed in building a pollution-control facility and the additional expenditure to operate the facility throughout its life span, he said.

While Malaysia has favoured a preventative approach, Mr Maheswaran said this has not been fully adhered to as the immediate priority was to repair the damage accumulated over the years.

The conventional pollution control approach was the most expedient and available one, he said. Even so, Mr Maheswaran noted, technology suited to local conditions rather than costly and complex imported equipment has been adopted.

Mr Maheswaran was presenting a paper on the progress of treatment of wastes in Malaysia at a regional chemistry seminar yesterday.

The palm oil and rubber industries are the major polluters in Malaysia, accounting for about 80 per cent of industrial pollution. The 149 palm oil mills currently in operation discharge about 284 tonnes a day of biochemical oxygen demand (BOD), 34 per cent of the total discharged by the four major sources of water pollution. This is equivalent to waste generated by more than half the population of Peninsular Malaysia.

(The BOD, as a pollution index, denotes the amount of oxygen used up when effluent enters rivers and streams, often resulting in a deficiency which kills off fish and other marine life.)

Sewage is the next major culprit, with a BOD level of 214 tonnes a day (26 per cent of the total) followed by rubber, at 208 tonnes a day (25 per cent) and the manufacturing industry, 124 tonnes a day (15 per cent).

Almost all the BOD discharged in the manufacturing sector is from three industries — food, industrial chemicals and other chemical products, and textiles — each producing more or less similar amounts.

As palm oil production is estimated to double by 1985, this means the potential quantity of BOD generated will approach 500 tonnes a day, Mr Maheswaran said.

Many industries in Malaysia are taking steps to minimise the amounts of waste originating in the industrial process. These included modifying or replacing the raw material input and production process, separating "strong waste" streams, recirculating water and changing product output.

Discussing pollution from the palm oil industry, Mr Maheswaran said the conventional pollution technology was not economic. The industry has therefore adopted such approaches as conservation, process modification, waste utilisation and low-cost waste treatment technology, which have successfully reduced pollution at the source, Mr Maheswaran said.

The cheapest method of treating palm oil and rubber waste in Malaysia consists of digester ponds. The cost for a palm oil mill ranges from $250,000 to $1 million depending on the capacity of the mill while the cost for rubber processing factories is about a fifth lower.

The land area needed for such a plant is less than one hectare. Maintenance and operating cost are about $300 a month. For factories and mills in urban areas, oxidation systems have been adopted which require less land and are less expensive than conventional systems.

At least one palm oil mill is using effluent to irrigate oil palm fields and the nutrients and water thus supplied have resulted in higher yields. An alternative use is turning effluent into animal feed. But this process has still not been widely used due to the high capital outlay and uncertainties in the commercial acceptability of the resulting product.

Progress of waste treatment in manufacturing industries has not been satisfactory, Mr Maheswaran noted.

Another participant at the seminar, Dr C.K. John of the Rubber Research Institute of Malaysia, agreed with Mr Maheswaran that more research will have to be done before preliminary uses of wastes from palm oil and other agricultural industries can be developed into commercially feasible projects.

Dr John said large quantities of waste were not being productively used due to a lack of detailed information about the various types of wastes, their specific characteristics and of the technological know-how to recover and process them.

The wastes are also distributed over a wide area.

"For example, 65 per cent of the waste from the rubber industry is produced in smallholdings ranging in size from two to 40 hectares. This made recovery uneconomic."

But the recent move to collect part of the latex from smallholdings to process in large centralised factories will reduce somewhat the extent of the problem.

The recovery of wastes from palm oil, sugar cane, pineapple and rice factories is likely to be less troublesome as the processing is fairly centralised.

CSO: 5000/8017

SOCIAL CREDIT PARTY ANNOUNCES ITS ENVIRONMENTAL POLICIES

Logging Ban Proposed

Wellington THE EVENING POST in English 20 May 81 p 6

/Text/ A Social Credit Government would permanently ban all logging from several major virgin forests, amend the Mining Act so that separate applications to prospect and mine would be heard and decided in the district to which they related, and establish a ministry and nature conservancy charged with preserving and enhancing New Zealand's resources and natural heritage, it was stated last night.

Announcing Social Credit's environmental policies, the league's spokesman on natural resources and environment, Mrs Pat Wojcik, reaffirmed Socred's determination to preserve the North Island virgin forests of Puketi, Whirinaki, Waikaremoana, Pureora and Waihaha in their natural state. Adjacent to the West Taupo stands, buffer protection blocks of regenerating forest would be needed, she said.

The Minginui mill would be converted to exotics and an industry based on sustained yield from tawa established in the region west of Taupo.

On the West Coast, Mrs Wojcik said an immediate, permanent ban on logging would be imposed in the virgin forests of Maruia, Paparoa and Ohinetamatea. A ten-year moratorium on logging would apply in South Okarito and Waikikupa, to be succeeded by permanent protection if ample jobs had been secured in South Westland in the meantime.

Industries

Social Credit saw potential in the diversification of West Coast industries, Mrs Wojcik said.

The league had such options in mind as coal mining and petrochemicals based on coal for Westport: sustained yield management of beech from Inangahua and Grey to support sawmilling, furniture manufacture, wood chips and ethanol at Reefton, and a greatly expanded fishing industry, including deep sea fishing and shore processing, at Greymouth. Hokitika — Rustapu would be encouraged to expand farming and exotic forestry for both sawmilling and further processing.

In the meantime, timber supplies would come from north Westland and would include a proportion of beech. The timber from south Westland would be retained within the region and used to best advantage in furniture, joinery and veneer. Farming and farm forestry would be encouraged and a variety of exotic species would be planted between the Waitaha and Poerua rivers. Logging would be scaled down in the Saltwater and North Okarito forests for the time being, with the aim of establishing sustained yield of high quality rimu for special purposes in the future.

Mining

Tourism, especially scenic tours, hiking, guided walks, canoeing and summer skiing on the glaciers would be encouraged.

Mrs Wojcik said Social Credit would establish a government-funded minerals corporation to carry out or commission work on exploration, delineation and assay. Development of proven opportunities would be done by public mining companies, structured by agreement with the corporation. Unless it could be proved to be of advantage to New Zealand, mining rights would not be let to foreign interests.

A mining court would be established in conjunction with the Planning Tribunal. Applications for licences to prospect or mine would be heard and decided in the district to which they related. A prospecting licence would not automatically mean the right to mine. Such a licence-holder would, however, have priority over other applicants.

Conservation

Mrs Wojcik said that under a Social Credit government, the Minister for the Environment, who now had only an advisory role, would become the minister of natural resources and environment. The Commission for the Environment would be replaced by a ministry of natural resources and environment. Environmental standards would be consolidated as a conservation code, to which other legislative acts, where appropriate, would be subordinate.

All commercial ventures, both public and private, and all national development undertaken by government or local bodies, would be subject to the provisions of the conservation code, which would be enforced by the Justice Department.

The conservation code would include a system of environmental zoning for the land and territorial waters, to protect wildlife, native forests, landscape and recreation against the encroachments of commercial enterprise.

Overseas

On the international scene, Social Credit would press for international agreement to outlaw the dumping of radioactive waste on the seabed: store all radioactive wastes in monitored, recoverable, terrestrial sites: and implement standards and procedures which would lessen the possibility of reactor accidents, sabotage and theft of weapons grade material.

Under Social Credit, New Zealand would continue to support a minimum ten-year moratorium on all commercial whaling.

It would press for freedom of information derived from International Whaling Commission scientific sessions and would support international control of krill fishing, Mrs Wojcik said.

Mixed Reaction to Plans

Christchurch THE PRESS in English 22 May 81 p 7

[Text]

PA Wellington

Environmental groups have praised the Social Credit election policy on environmental and natural resources.

The president of the Nelson-based Native Forest Action Council, Miss Gwenny Davis, said that the policy was both well researched and a positive balance between conservation and development.

The Environmental Defence Society's secretary, Mr G. Taylor, said the league plans were enlightened.

But both were disappointed by proposals for a 10-year moratorium on logging in South Okarito and Waikukupa native forests in south Westland, rather than adding the forests to Westland National Park.

"The policy gives two-thirds of what we are asking for on native forests and leaves the door open for future consideration of outstanding issues," Miss Davis said.

The Minister of Forests (Mr V. S. Young) said Social Credit's policy was one of unemployment and further burdens for the taxpayer. He said he was astounded at the cavalier way Social Credit was prepared to burden the taxpayer with more costs.

"The effects of their policy must be to increase environmental costs and compensation payments to the indigenous sawmilling industry. More importantly, the greatest tragedy is that their proposals would destroy jobs in places where there is no other employment," Mr Young said.

CSO: 5000

NEW ZEALAND

ENVIRONMENT COMMISSIONER WEIGHS NATIONAL DEVELOPMENT ACT

Wellington THE EVENING POST in English 29 May 81 p 3

[Text]

THE procedures of the National Development Act have advantages and disadvantages for the Commission for the Environment, says commissioner Mr Ken Piddington.

Commenting on the announcement that consent has been given to the building of a methanol plant in Taranaki, Mr Piddington said that it is clear from this, the first project to be dealt with under the National Development Act, that there are advantages and disadvantages for the commission in the act's procedures.

One advantage of the result of this particular hearing was that several important rulings were made by the Planning Tribunal, he said.

Preferable

Another was that "in an extreme case it may be preferable for a resource not to be used if use of the resource would result in unacceptable environmental damage."

One of these stated that if the costs of meeting environmental requirements are unacceptable to the developer, then the site is not a suitable one.

The National Development Act also had the advantage of establishing procedures for the environmental evaluation of a project and clearly stating the commission's role, said Mr Piddington.

Costly

Some of the disadvantages that this first hearing had revealed were that under the National Development Act a proposal was specific to one site, so there was no opportunity from an environmental point of view to evaluate alternative sites.

"Also," said Mr Piddington, "proceedings are a costly business and involve a great deal of time and energy for all parties, including the commission.

"This means it is even harder for individuals or voluntary organisations to put in much effort at the tribunal stage."

CSO: 5000

NEW ZEALAND

RIVER PROTECTION POLICIES REMAIN CONTENTIOUS ISSUE

Hydro Dams Question

Wellington THE EVENING POST in English 29 May 81 p 10

[Text] **"Entrusting the Minister of Works and Development with protecting rivers of outstanding national importance is like making a burglar the guardian of the Crown jewels," says the Wild and Scenic Rivers Action Committee.**

Commenting on the announcement yesterday that legislation designed to give the Government absolute water rights to build hydro dams on designated "wild and scenic rivers" has been put aside, committee chairman Mr Tony Brunt said that he congratulated the Minister for the Environment, Dr Shearer, for the part he played in the decision.

"The removal of the clause giving the Minister of Works the power to make non-reviewable decisions on crown water rights eliminates a provision that was a dangerous threat to all environmental interests, not just river users," said Mr Brunt.

"Mr Shearer has been doing excellent work on this issue behind closed doors and deserves full credit for it."

Mr Brunt said his committee is concerned, however, that the draft legislation still leaves solely in the hands of the Minister of Works the power to designate rivers of national importance.

"This is rather like making a burglar the guardian of the Crown jewels," he said.

"The Minister of Works is the nation's chief dammer. He's the man in charge of power investigation and development.

"Our view is that another Minister, one with a strong environmental responsibility, should be the person to initiate the protection of wild and scenic rivers," he said.

'EVENING POST' Comment

Wellington THE EVENING POST in English 29 May 81 p 8

[Editorial: "Dr Shearer Makes Presence Felt"]

[Excerpts] THE INFLUENCE that can be exerted by a dedicated and informed conservationist in the role of Minister for the Environment has been clearly demonstrated within a few months of Dr Shearer's appointment to the portfolio.

Dr Shearer was bombarded with submissions after details leaked out of draft legislation designed to protect wild and scenic rivers. There was alarm among environmentalists over fast-track procedures which would have granted the Government absolute water rights to build hydro dams on designated "wild and scenic rivers." Now this provision has been dropped by the Government — at least until after the election.

It is no mean victory for the environmentalists because a clause would have given the Minister of Works, Mr Bill Young, a "final, non-reviewable ministerial discretion on Crown water rights."

We note that Dr Shearer is reluctant to concede that he played a forceful and significant part in getting the fast-track procedures dropped. This attitude may be due not so much to modesty as to an awareness that he could become increasingly vulnerable to the demands of environmentalists on all kinds of scores.

The Prime Minister, Mr Muldoon, made a good move in appointing a man of Dr Shearer's background and beliefs to the environment portfolio at a time when there is a great deal of public concern about the environmental implications of the Government's "think big" development strategy. His appointment also resolved an awkward and conflicting situation in which Mr Venn Young was exercising a two-hat role in being both Minister of Forests and Minister for the Environment.

While it is plain that environmentalists and conservationists have a real friend in Dr Shearer at the cabinet table, it is only realistic to accept that there will necessarily be a limit to what he can do on their behalf against the broad picture of the country's economic future.

They would do well to take this into account and ration their demands accordingly.

Mountain Clubs Position

Wellington THE EVENING POST in English 26 May 81 p 21

[Text]

The Federated Mountain Clubs of New Zealand are concerned that legislation to come before Parliament later this year may open the way to development of wild and scenic rivers.

Speaking after the organisation's annual meeting at the weekend, a vice-president, Dr Hugh Barr, said members wanted legislation that would provide permanent protection for "outstanding" rivers.

"They are at the drafting stage and the Ministry of Works and Development, who have put the bill forward, disagree that you should be able to protect rivers," he said.

Dr Barr said that some rivers in the North Island, popular with trampers, were potential sites for small-scale hydro-electric development. He named the Waiohine in the Wairarapa, the Motu in the Bay of Plenty, and the Wanganui River.

The legislation coming forward is a proposed amendment to the Water and Soil Conservation Act 1967.

Replying to the criticism, a spokesman from the Minister of Works and Development's office said the intention of the proposed amendment was specifically to provide protection for wild and scenic rivers.

The ministry was responsible for putting forward the proposal because, through the Water and Soil Conservation Act, the minister was the person responsible for the management of water and soil resources, said the spokesman.

Implications for Irrigation

Christchurch THE PRESS in English 22 May 81 p 14

[Text]

There is concern among farmers about the implications for irrigation of plans to protect rivers because of their scenic attractions, recreational value or other special natural features.

There is uncertainty about the form that the protection might take under legislation which is expected before the elections at the end of the year.

If a whole river like the Rakaia was closed off to uses like irrigation, the chairman of the Central Plains Irrigation Association, Mr D. G. Watson, said it would be a disaster and sheer irresponsibility.

And while it seems unlikely that such a drastic course will be taken when the major political parties are also anxious to encourage irrigation, at the very least it may make the process of launching an irrigation scheme an even more protracted course than it already is.

If approval was given today in principle to the Lower Rakaia irrigation scheme going ahead it would probably be something like four years before construction began.

Following public discussion after the issue of a paper by the Commission for the Environment, the Government late in 1979 approved a policy statement in which it said that rivers or sections of rivers that had outstanding wild, scenic or other natural characteristics should be protected.

To give effect to this it was stated that to supplement existing legislation statutory provision should be made, particularly in the revised water and soil legislation.

The District Commissioner of Works, Mr P. F. Reynolds, said last week that some months ago it had been reported in the media that both the Prime Minister and the Minister of the Environment had stated that there would be amendments to the water and soil legislation prior to the elections, recognising the need to make special provisions for rivers with special recreational, scenic or other values.

"My information is that this legislation is currently under consideration and no doubt it will be referred for public comment in the usual way," he said.

At the request of the National Water and Soil Conservation Organisation catchment authorities have been asked to compile a short list of rivers or parts of rivers of national importance in conjunction with local representatives of government departments, local authorities, common interest groups (a club or association engaged in enhancing regional natural resources) and user bodies or groups like a club or association whose members use a river for recreation — these people are distinct from those who use a river by extracting water from it for, say, irrigation.

The North Canterbury Catchment or Regional Water Board has recently been going through this exercise. In a sense the board has really been a vehicle for the process.

Its secretary, Mr E. R. Wood, says that it initially advertised inviting submissions from interested groups and also sent copies of this notice to organisations that might be interested. Around 25 to 27 submissions came to hand and the organisations that had submitted these were invited to attend a meeting to meet the board. At that meeting on March 23 attended by about 55 persons it was decided to set up a working party to examine the submissions and draw up recommendations for rivers in the area.

The president of North Canterbury Federated Farmers, Mr A. L. Mulholland, complained at a recent meeting of his provincial executive that no approach had been made to his organisation, but Mr Wood said that if the organisation had made submissions it would certainly have been invited.

Some farming interests were, however, present at the initial meeting — both the chairman of the Central Plains Irrigation Association, Mr Watson, and the chairman of the Lower Rakaia Irrigation Association, Mr B. K. Cameron, both of whom had made submissions.

Mr Watson was proposed for the working party but his nomination was not supported on the grounds that it should include people who were without development-type interests in a river.

The working party, including two members of the board, met on April 9 when some recommendations were formulated. Those attending the first meeting were then recalled to another meeting on April 23 attended by about 25, at which approval was given to a list of rivers or parts of rivers for which protection was sought, and at a meeting of the board on May 8 it was decided to endorse the nominations for further investigation and inclusion in a national list or inventory of wild and scenic rivers.

This list and others like it, when received by the National Water and Soil Conservation Organisation, will be further investigated and the organisation will also seek wide public opinion.

The organisation has, in fact, convened a steering committee to complete the national inventory to establish the scenic, recreational and other features of rivers. It includes as well as representatives of interested Government departments, representatives of the Commission for the Environment, the National Water and Soil Conservation Organisation, the New Zealand Catchment Authorities' Association and the Queen Elizabeth II National Trust.

The recommendations from North Canterbury are wide ranging. It is said that of rivers of any major importance the Waipara is the only one omitted.

The whole of the Rakaia from the source to the sea is recommended for consideration for inclusion in the national inventory, and likewise the whole of the Waimakariri, excluding the Eyre and the Kaiapoi rivers.

The Ashley river estuary, including the tidal reaches of Saltwater Creek, is also recommended for inclusion, as is also the Hurunui from the source to Mandamus, excluding the south branch, and the Waiau from the source to the confluence with the Hope, including all tributaries.

"My understanding is that this list should be extremely small," said Mr Reynolds, "since an opportunity will exist later to prepare a larger list of rivers of regional or local importance. My impression, however, is that the lists in Canterbury are far too large."

Someone else has commented that when people interested in preserving rivers or similar natural phenomena are brought together, there are people interested in various parts of these waterways and the end result is that the whole of a river may be involved.

It has, however, been suggested that the system of protecting rivers or parts of rivers and the development of management planning that is likely to go hand in hand with it could be beneficial for planners when, say, working on an irrigation scheme in knowing more clearly exactly where they can and cannot go for water.

But in the meantime while the proposed legislation has not been seen and the precise sort of system that will be developed for protecting rivers or parts of rivers is not known, farmers are not very happy with the position.

Mr Mulholland said: "The implications of declaring a river like the Rakaia wild and scenic are quite frightening so far as irrigation is concerned. This river is absolutely vital for the Central Plains irrigation scheme, the water from the upper reaches being the only source of supply.

"I believe all farmers accept the concept of maintaining the natural and scenic areas of our country wherever possible. However, where there is a conflict between disturbing nature for the supply of life-giving water to our farmlands on the one hand and stubbornly maintaining a 'hands off' policy on the other, surely to God commonsense must prevail.

"In our AGROW talks to various groups of people we have made the point that we believe an economic growth rate of 2 to 4 per cent per year can be achieved, with a lift in the foreign exchange earnings from agriculture in the next decade from $4.1 billion to $6.3 billion.

"A major expansion in our irrigation schemes will be vital to ensure that production is maintained, not to mention the added value of multiple use in terms of the production of hydro-electric power.

"It may be that Federated Farmers are over-reacting to this concept. However, one cannot help but be suspicious when one studies the policy paper. It appears to be aimed solely at recreational and environmental aspects of rivers with no thought given to other important potential functions, such as irrigation and power generation."

Throughout the document reference was made to the fact that "users" would be consulted, but an appendix gave interpretations of the terms used and a user group or body was "a club or association whose members use a river area as a recreational resource e.g. a canoeing club. "There is no mention whatsoever of farming or other commercial users or interests."

Mr Watson was deeply concerned about the Rakaia.

This was a very substantial natural resource, he said, that could bring tremendous benefits to the whole of the country if the allocation plan agreed to some years ago was used to provide water for all of the interested users. It appeared now, however, that many of the parties to the agreement had gone back on their word and wanted sole use of the river for their ends.

Peak flows coincided well with the irrigation season. The thaw of snow in the spring brought the river up in the spring and summer, so that the flow pattern fitted in with the time that irrigation was needed.

Their concern about the Rakaia was due to a lack of knowledge of the implications of a river being declared a wild and scenic river. If it was locked up it would be a tragedy — it would be a resource that was wasted. It would be sheer irresponsibility to lock up such a river so that irrigation was precluded — it would be extremely detrimental to the continuing development of the Canterbury region.

He expresses the hope that there will be an opportunity to make submissions on the proposals.

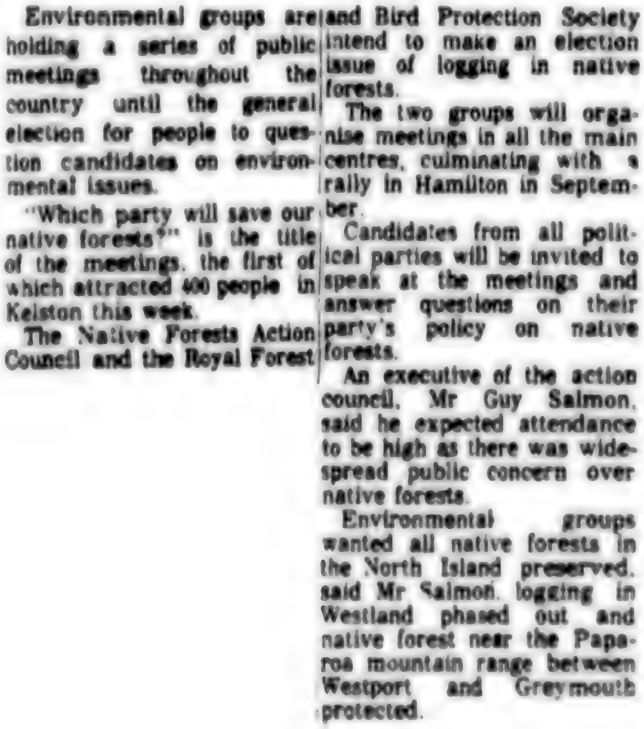
The Government's policy statement says that while it is intended that recreational users should have the same opportunity to apply for the protection of specific rivers or sections of rivers as is now available for those seeking rights for other uses, there will also be opportunity for submissions, objections and appeals, providing a public method by which competing demands can be identified and discussed, priorities assessed and differences resolved.

CSO1 5000

ENVIRONMENTAL GROUPS QUERY CANDIDATES ON FOREST POLICY

Auckland THE NEW ZEALAND HERALD in English 23 May 81 p 8

/Text/



Environmental groups are holding a series of public meetings throughout the country until the general election for people to question candidates on environmental issues.

"Which party will save our native forests?" is the title of the meetings, the first of which attracted 400 people in Kelston this week.

The Native Forests Action Council and the Royal Forest and Bird Protection Society intend to make an election issue of logging in native forests.

The two groups will organise meetings in all the main centres, culminating with a rally in Hamilton in September.

Candidates from all political parties will be invited to speak at the meetings and answer questions on their party's policy on native forests.

An executive of the action council, Mr Guy Salmon, said he expected attendance to be high as there was widespread public concern over native forests.

Environmental groups wanted all native forests in the North Island preserved, said Mr Salmon, logging in Westland phased out and native forest near the Paparoa mountain range between Westport and Greymouth protected.

CSO: 5000

FORMATION OF NATION'S SECOND LARGEST FOREST PARK ANNOUNCED

Wellington THE EVENING POST in English 25 May 81 p 10

[Text] A new state forest park in the Murchison region and moves towards setting up two National Reserves were announced by the Minister of Lands and Forests, Mr Venn Young.

The Victoria State Forest Park would be made up of six forests in the Inangahua/Murchison region. Covering more than 200,000 hectares, the park would be the second biggest forest park in the country, he said.

The forests involved were Waiheke, Pohaturoa, Hukawai, Tawhai, Waitahu and Inangahua East. Parts of the Maruia State Forest below Springs Junction would also be included.

Mr Young said the park had important recreational and historical attractions. Tramping and hunting was offered by the beech forested slopes of the Brunner and Victoria Ranges, and the upper Grey catchment. It also included the Reefton goldfields.

Goldmines

Old tracks to the sites and relics of the large quartz gold mines were being opened by the Forest Service for public use. These sites and other historical features had been recorded for several years and they would be preserved for their educational and historic interest.

Mr Young said that although most of the forests were protection forests, the forest park would be a working one. Coal mines would operate within it, and its timber resources were important to maintaining the region's sawmilling industry.

Beech and podocarp logs would be available to mills in the Grey Valley until young exotic plantations in North Westland matured in the 1990s.

Beech trees

Mr Young said the Maruia Valley had some of New Zealand's finest red and silver beech forests. These forests would be perpetuated by a combination of reserves and as managed production forests.

In the zoned production areas, mature beech, much of which had been damaged by scale insects, would be selectively removed, and a vigorous young forest established by natural regeneration with supplementary planting where necessary.

The forests within the forest park were important to the West Coast and options for the use of the timber within them would remain open, Mr Young said.

As well, several dedicated areas, important for their scientific values would be set aside.

There were the Big River Ecological Area (6733ha) and Coal Creek Ecological Area (3023ha). Two further ecological areas, Lake Christabel and Central Maruia, totalling 17,000ha, had been approved and will be gazetted shortly.

Management

Mr Young said nominations for members of an advisory committee for the park would be called for by the conservator of forests, Hokitika, and a draft management plan outlining the park's resources and proposed management would be released for public comment after being considered by the advisory committee.

Mr Young also announced he would shortly call for public comment on the proposed establishment of the Lewis Pass National Reserve.

Initially this would be confined to the core area of the Lewis Pass scenic reserve, from the pass through to Springs Junction. Once established it was proposed to significantly enlarge the reserve after a rationalisation of state forest and reserve land in the area.

Ultimately a corridor of National Reserve land would be established from the Boyle confluence to Springs Junction, he said.

Licensed use

All areas subject to grazing licences and mining privileges would not be affected by the proposals.

While on a visit to the West Coast, Mr Young also announced his intention to call for public comment on the establishment of a national reserve covering the scenic and nature reserves at Punakaiki.

After official notification of these proposals the public would have three months in which to comment, he said.

CSO: 5000

FOREST PLAN SEEKS TO BALANCE PRESERVATION, LOGGING USE

Auckland THE NEW ZEALAND HERALD in English 3 Jun 81 Sec 2 p 1

/Article by Heather Ayrton/

/Text/

PROTECTION of the kokako and its habitat is a major consideration in proposals for a regional management plan for King Country forests extending to 1990.

Considerable emphasis has also been placed on environmental aspects, such as the provision of ecological reserves and public recreation, to gain an acceptable balance with the expressed need for continuation of log production.

The King Country forests region extends from north-west of Lake Taupo through Taumarunui, Te Kuiti and Otorohanga to the Pirongia Forest Park.

It includes the Pureora State Forest Park which covers 80,000 hectares of the Rangitoto and Hauhungaroa Ranges.

Public release of the management plan for this park has been delayed until the regional plan is completed.

Submissions on the draft outline of the proposed regional plan close with the Conservator of Forests, Gavin MoLoy, in Auckland on June 30.

The Forest Service says the proposed regional plan aims to establish management proposals for the King Country forests as a significant part of forests whose management is to be considered as a whole.

This year the Forest Service established a central North Island indigenous forest management unit modelled on the kauri management unit, with a brief to look at the management of all the central North Island forests.

For the past three years, management of the King Country forests has been aimed at reducing the amount of native timber being logged to equate with that being grown.

A logging moratorium on sensitive wildlife habitats, specifically part of the Pureora north block and the area north of the Waihora stream at Tihoi, is due to end on December 31.

A study group composed of wildlife service officers, the Royal Forest and Bird Protection Society and the Forest Service are investigating the effects of selective logging practices on forest birdlife, with particular emphasis on the kokako.

More reserves are being set aside for scientific, wildlife, educational and recreational purposes.

A Forest Service officer closely involved with the draft management plan for the region, John Halkett, head of the kauri management unit, believes it presents a range of forest options and allows for a maximum of public opinion to be considered before any final decisions are formulated.

In 1978 the supply of native timber cut from the King Country was reduced from a maximum of 60,000 cubic metres of predominantly rimu to a maximum of 6000 cubic metres a year until the end of 1981.

To develop management techniques for what are now predominantly tawa forests, a research programme which includes small-scale logging trials will be drawn up by the end of this year.

Although tawa logs for pulp are recovered from the region for use in high-quality paper manufacture at Kinleith, the principal present market for it is as logs for wood turning and furniture manufacturing.

The King Country and Rotorua regions have been the main sources of tawa for the production of high-quality writing paper. Its short-fibre pulp blends well with the longer fibre of exotic softwoods.

New Zealand Forest Products has an annual requirement of tawa of about 100,000 cubic metres. But by about 1986, eucalypts now being established may replace the tawa requirements of the company.

Competition for the tawa remaining in private ownership is expected to be high.

There are an estimated 836,000 cubic metres of potential tawa sawlogs in areas of the King Country zoned for long-term indigenous production. But some 386,000 cubic metres are in the section north of the Pureora Forest Park where kokako live.

It has been suggested that a 125-year rotation cycle should be adequate to produce merchantable tawa timber in managed stands. If the north block of the Pureora Forest Park is excluded because of the possibility of adverse effect on the kokako population, the sustainable yield could be reduced to 3300 cubic metres a year.

Under a tawa management regime, the Forest Service would undertake all selective logging to ensure that the highest silvicultural standards were maintained.

With the steady increase of exotic plantings in the region from 33 hectares in 1946-50 to the present total of 23,272 hectares — of which 15,370 are in private plantings and 7902 in state — the proposed plan suggests that the uneven distribution of the exotic resource has serious implications for the short-term supply of sawn timber from the area.

The extent and location of land suitable for afforestation in the King Country will be reassessed. Although radiata pine will continue to be the predominant species for exotic planting, there are plans to establish eucalypts in the Hurakai Forest and macrocarpa along the coastal forest margins.

The potential of other exotics and indigenous timber trees such as the Tasmanian blackwood, which is suitable for high-quality furniture, are being evaluated.

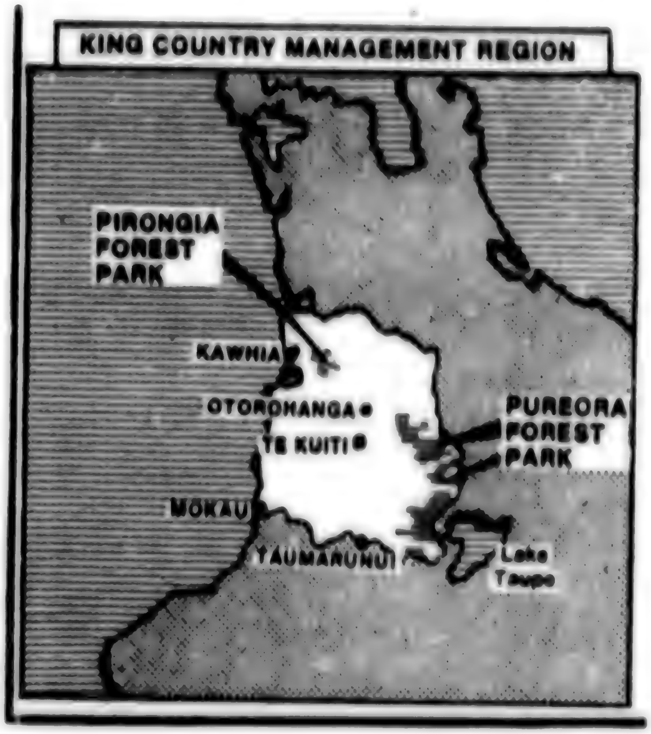
Where land is to be cleared for exotic plantings, the proposed management plan recommends an environmental assessment report.

There is little doubt that there will be public acceptance of the challenge to evaluate the exotic conversion options. These include:

- The need to put land to its most productive use to sustain the regional economy and employment levels;
- The national need to retain as much of the central North Island in indigenous forest as possible;
- The need to consider the retention of the native forest for its value as a wildlife habitat and other non-wood values including aesthetic appeal.

Although the protection of the kokako is of great importance, animals including sparse colonies of red deer, goats, pigs and even opossums are referred to.

So too are the limestone caves, especially those in the Tawarau State Forest, and the need for protection of archaeological and historic sites.


KING COUNTRY MANAGEMENT REGION

CSO: 5000

PROSPECTING BIDS BY MINING COMPANIES DRAW OPPOSITION

Watchdog Committee Stand

Auckland THE NEW ZEALAND HERALD in English 15 May 81 p 2

[Text]

Staff Reporter **Hamilton**

The mining company Amax Exploration (New Zealand) Inc has applied for a prospecting licence for a 2000-hectare area near Paeroa.

The area covered by the Amax application takes in Komata, six kilometres from Paeroa, and is bounded by state highway 26, which runs between Paeroa and Thames, and state highway 2, which runs between Paeroa and Waihi.

Mr Peter Verschaffelt spokesman for the Peninsula Watchdog Committee, which opposes large-scale mining in the Coromandel, said yesterday that his group would contest the application.

Social Responsibility

He said the Komata area was clearly unsuited to large-scale mining, for it was susceptible to bad flooding. The recent floods had underlined that fact.

Mine tailings hit by floodwaters caused water pollution, he said.

While Watchdog opposed the application, Mr Verschaffelt said it welcomed Amax's sense of social responsibility in publishing with its advertisements a map showing the area in which it intends to prospect.

Meanwhile, the group has hailed as "a victory" the decision of Mineral Resources NZ Ltd not to proceed with prospecting licence applications in the Moehau area of the Coromandel Peninsula.

Steep Terrain

Mr Verschaffelt said there was "an air of jubilation" among peninsula residents over the company decision.

He said the Moehau area had many of the features which made other parts of the area unsuitable for large-scale mining. These included steep terrain, historical importance and susceptibility to heavy rain.

Other mining companies, he said, should withdraw applications for prospecting on the peninsula.

Closure of Area Sought

Auckland THE NEW ZEALAND HERALD in English 15 May 81 p 2

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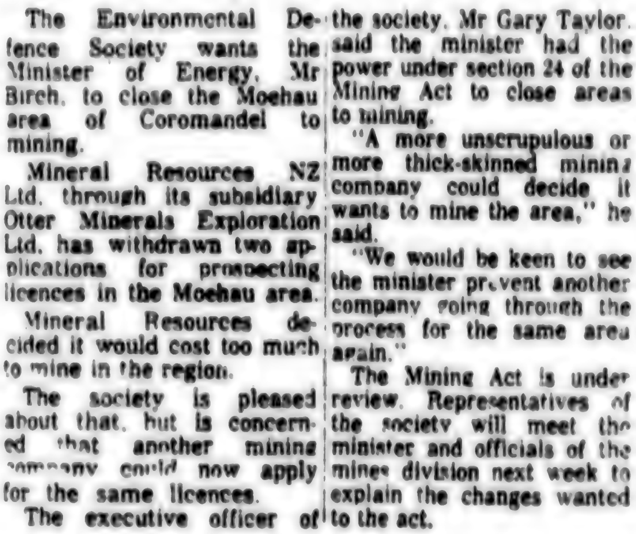


The Environmental Defence Society wants the Minister of Energy, Mr Birch, to close the Moehau area of Coromandel to mining.

Mineral Resources NZ Ltd, through its subsidiary Otter Minerals Exploration Ltd, has withdrawn two applications for prospecting licences in the Moehau area.

Mineral Resources decided it would cost too much to mine in the region.

The society is pleased about that, but is concerned that another mining company could now apply for the same licences.

The executive officer of the society, Mr Gary Taylor, said the minister had the power under section 24 of the Mining Act to close areas to mining.

"A more unscrupulous or more thick-skinned mining company could decide it wants to mine the area," he said.

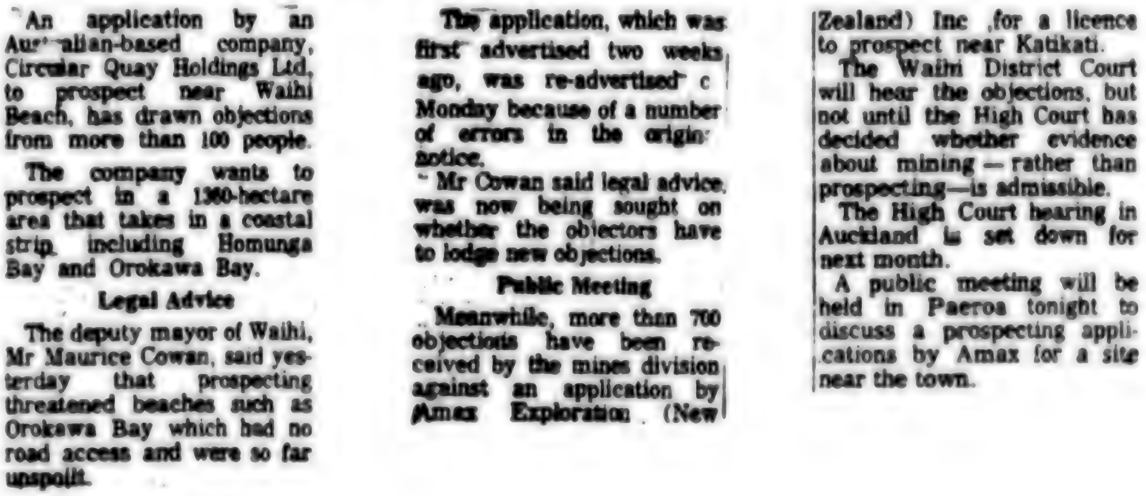
"We would be keen to see the minister prevent another company going through the process for the same area again."

The Mining Act is under review. Representatives of the society will meet the minister and officials of the mines division next week to explain the changes wanted to the act.

Many Objections Lodged

Auckland THE NEW ZEALAND HERALD in English 21 May 81 p 1

/Text/ Hamilton--More than 800 objections have been lodged with the mines division against two prospecting applications.



An application by an Australian-based company, Circular Quay Holdings Ltd, to prospect near Waihi Beach, has drawn objections from more than 100 people.

The company wants to prospect in a 1360-hectare area that takes in a coastal strip including Homunga Bay and Orokawa Bay.

Legal Advice

The deputy mayor of Waihi, Mr Maurice Cowan, said yesterday that prospecting threatened beaches such as Orokawa Bay which had no road access and were so far unspoilt.

The application, which was first advertised two weeks ago, was re-advertised c Monday because of a number of errors in the origin notice.

Mr Cowan said legal advice was now being sought on whether the objectors have to lodge new objections.

Public Meeting

Meanwhile, more than 700 objections have been received by the mines division against an application by Amax Exploration (New Zealand) Inc ,for a licence to prospect near Katikati.

The Waihi District Court will hear the objections, but not until the High Court has decided whether evidence about mining — rather than prospecting—is admissible.

The High Court hearing in Auckland is set down for next month.

A public meeting will be held in Paeroa tonight to discuss a prospecting applications by Amax for a site near the town.

CSO: 5000

PEOPLE'S REPUBLIC OF CHINA

POLLUTANT DANGERS OF IRRIGATION WATER, FERTILIZERS REVIEWED

Guangzhou HUANJING [ENVIRONMENT] in Chinese No 3, 30 Mar 81 p 7

[Article by Ma Junfeng [7456 1498 1496], Shenyang Municipal Environmental Protection Office: "Protection Against Pollution in the Spring Planting Season"]

[Text] When spring returns to the land, and all living things revive, the busy spring planting season is not far off. There is a considerable scientific basis for proper agricultural use of water and fertilizer.

Let us start with water. Water is the lifeblood of agriculture, and without it no crop could survive. The sources of agricultural water, in addition to natural precipitation, are subsurface water, river water and urban waste water. The harmful components of any polluted water can gradually accumulate in agricultural crops as a result of many years' irrigation. If people eat them for many years, their health will be harmed. Because cadmium-containing waste water was used in Japan to irrigate rice paddies, producing large amounts of cadmium containing rice, the people who ate it suffered from the "aching disease" that shocked the world.

It is easy for people to understand that river water and municipal waste water can be polluted by the industrial "three wastes"; but it may be harder for people to accept that idea that well water and other subsurface water may also be polluted to a degree that makes it unusable for irrigation. But extensive experience instructs us that well water must also be stringently protected. Surveys in Shenyang municipality in recent years indicated that because well water used in irrigation was polluted, more than 10,000 jin of vegetables were not fit to eat. Such instances have been numerous. In 1979, the well used for irrigation by a certain production team became polluted with chromium, so that all of the vegetables they grew contained it. Cabbage contained 5.2 mg/kg of chromium, and every kg of spinach contained 6 mg of it. Both were unfit to eat.

The harmful constituents of municipal waste water are much more complex. The waste water contains large quantities of ammonia, nitrogen, phosphorus and potassium which are beneficial for plant growth, which is welcomed by the peasants. But it should also be realized that the waste water contains large quantities of harmful heavy metals, and if used it may pollute grains and vegetables. Surveys indicate that some rice irrigated with waste water contains more than

1 mg/kg of cadmium, equivalent to the level in the area subject to the "aching disease" in Japan. The rice in some areas contains levels of arsenic which exceed our country's public health standard for food products. Accordingly, extreme care should be used in irrigating agricultural fields with waste water; it should be scientifically managed, and must be treated and chemically analyzed before use. Waste water which does not meet state standards for irrigation must not be used on the fields.

Now let us discuss fertilizer. There is an agricultural proverb that: "Planting without manure is blind groping". The saying is correct. As science has advanced, agricultural production has not been limited to farmyard fertilizers, but has come to use increasing quantities of chemical fertilizers. Although chemical fertilizers can produce increased yields, they also have an unfavorable aspect. For example, ammonium sulfate can introduce large quantities of the sulfate radical into the soil, producing hardpan, or it can percolate down to the ground and pollute water sources and increase water hardness. Accordingly, the proper quantities of chemical fertilizer should be used.

Many areas, particularly south of the Yangtze, are accustomed to using river and canal sludge as a fertilizer. We believe that using river sludge is like using municipal waste water: it has both advantages and disadvantages. Sludge contains heavy metals, generally in much higher concentrations than in waste water, and accordingly the pollution of agricultural crops which it produces is even graver. The following test was made in Shenyang City: sludge was mixed with ordinary soil in different proportions in a greenhouse and used to grow 250 trays of cabbage, rapeseed, celery, spinach and radishes. It was discovered that the cabbage was rather seriously polluted with mercury; 60 percent of it contained levels exceeding state health standards for foodstuffs. The cadmium pollution was second only to that of mercury. The cadmium content of the cabbage was roughly equivalent to 15 percent of the soil cadmium content. The other vegetables also contained differing amounts of mercury, cadmium, lead, arsenic and other harmful materials.

Thus it can be seen that although sludge has a certain fertilizing effect, it can produce rather grave pollution of grains and vegetables. The heavy metals in the sludge usually accumulate in the stalks and leaves of plants, and the stalks and leaves of vegetables are the parts which are used for food. Accordingly, sludge should not be used indiscriminately as a fertilizer, and its use on vegetables should be particularly strictly controlled so as to prevent harmful substances from entering the body through foodstuffs and harming health.

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CSO: 5000/4069

REFORESTATION OF BARREN LAND IN GUANGDONG DESCRIBED

Guangzhou HUANJING [ENVIRONMENT] in Chinese No 3, 30 Mar 81 pp 2-4

[Article by Zeng Xianhui [2582 2009 6548]: "Changing Sandy Hills to a Treasure House"]

[Text] In this hilly coastal region of western Guangdong Province, where bare hills and slopes are visible everywhere, the Xiaoliang Water and Soil Conservation Experiment and Popularization Station in Dianbai County is an eye-catching patch of green which has attracted the interest of many eminent scientists in this country and abroad and has been selected by the United Nations as one of the "man and the biosphere" scientific research bases.

A Manmade Catastrophe

The Xiaoliang Soil and Water Conservation station is different from other "man and the biosphere" scientific research bases in our country; while Mount Changbai and Mount Dinghu still preserve a portion of the virgin forest granted by nature, in the 1950's part of Xiaoliang Prefecture was nothing but bare soil.

Actually, for many generations Xiaoliang Prefecture was entirely covered by forest. According to reminiscences of old people from the prefecture and the evidence of tree roots remaining underground, as late as 100 years ago the area was covered by pine or mixed forests. Afterwards, when the rulers fell, the trees were cut down and the denuded soil was eroded for a century by the south's characteristic torrential rains, which removed a meter or more of soil in all, or more than 10,000 cubic meters of soil per square km per year. By 1957, when the soil and water conservation station was set up, there were 1,537 slide locations and 207 erosion gullies on the station's 26 hills and 7,650 mu of land. The topsoil humus content was below 1.5 percent, and soil nitrogen, phosphorus and potassium were insufficient. On summar days the surface temperature reached 60° C, while in the evening it fell rapidly to 20°. The soil was completely incapable of retaining rain water, so that it became dried out if it did not rain for a few days, and when it did rain, mud and sand were washed into the nearby fields, a phenomenon that was known as the "tiger of the fields." Rice yields were only about 100 jin per mu, and in some cases not a single grain was harvested.

More than 100 years ago, when people greedily looked for immediate gain, and indiscriminately cut trees on this land, nobody could have predicted that they would leave to posterity ruined hills in whose soil no grass grew, over which no birds flew, and on which not even an ant could survive. Whenever the sun set in summer, both sky and land were crimson, and the dry and lowering air was nearly stifling, creating an extremely bleak and desolate scene. This was a catastrophe created by an ignorance of ecology.

An Arduous Path

If a blighted environment such as that in Xiaoliang Prefecture were not remade, it would be impossible to develop agricultural production, and it would gradually encroach upon the surrounding farmland and change it into waste land. The reasoning was quite simple: to expand agriculture it was first necessary to improve the environment there.

But could an environment ruined by human social activity recover through human efforts? An examination of the soil and water conservation work in Xiaoliang is extremely instructive.

In its efforts to improve the environment over the last 23 years, the station has had successful experience and lessons of failure. In its first two years, the station staff concentrated on building embankments to hold back the sand, check dams, "fish scale pits," contour trenches and other engineering works, undertaken with little coordination with biological measures, so that the works were generally washed away and the results were poor. Later, they adopted a comprehensive approach based on afforestation, and after long experience they found and summarized a complete set of experiences, including: combinations of engineering works and biological measures based on local conditions and on the particular kinds of damage; the combination of concentrated measures, continuous measures and repair of gullies and of slopes; and a transition from low-level forest to high-level forest and a combination of short-term and long-term returns, thereby achieving excellent results.

This is a brick-red soil region on the edge of the tropics, and if it lacks forest cover serious erosion results. The soil has already been returned to its original physical and chemical condition, and if the process continues, there is a danger that it will turn into a red desert. But in order to restore the various living things in this blighted environment, water is a critical factor. Without trees there can be no water, while without water, trees will not survive. Accordingly, it is first necessary to plant trees and keep them alive, so that the arid tropical situation will gradually revert to a moist tropical situation, creating the conditions for restoring and developing the various living things.

However, afforestation was far from easy here. Initially they were eager for easy results and quick success and used the "one hoe, one seedling" method of planting; but the seedlings all died. It turned out that because the topsoil lacked organic matter and organisms, there were almost no pores and capillaries in it, so that water could not penetrate it, and subsurface moisture could not be transported to the surface. The soil moisture content 40 centimeters deep was only 8 to 9 percent, so that when the hoe method was used there was no hope of keeping a tree alive. To deal with this climatic and soil characteristic, they changed this crude and simple method for the method of digging large holes (40 cm wide, long and deep), dug contour trenches (60 cm wide and deep and 20-30 meters long), and used different measures in accordance with the different topography and types of trees; when planting bendo eucalyptus they used the method of raising the seedlings in beds, which they grew up and formed a forest. When planting lemon eucalyptus, they raised the plants in nutrient pots. On eroded slopes they selected and planted half-year old masson pine or terraces of Chinese fan palm. In silted bottom land they planted carambola and other fruit trees. And along the edges of check dams they planted Acacia confusa. Their procedure was to introduce the narrow-leaved drought-resistant varieties such as longyuan eucalyptus and masson pine as first-stage, vanguard trees which covered the surface and made some initial improvements in the soil's water absorption and retention capability and its structure. Then, they gradually proceeded to a higher stage semitropical monsoon evergreen broadleaf forest.

When the above measures were adopted, the Xiaoliang station's tree survival rate exceeded 90 percent. Beginning their transplanting in 1959, by 1965 more than 7,000 mu of bare hills were already covered with bendo eucalyptus, horsetail beefwood, masson pine and bamboo (subsequently part of the forest area was assigned to local communes, so currently there is 4,700 mu). After 1965 they expanded to more than 600 mu of lichees, carambola, banana, pepper, Chinese fan palm and other economic trees. By 1969 they were self-sufficient.

Since 1973, they have introduced more than 170 foreign trees and herbs and have successfully raised 200 mu of mixed broadleaf high forest trees and shrubs. In this mixed forest, Authocephalus chinensis, spinulose tree fern, olive, baige [4101 2706], large-leaved Acacia, Sargent gloryvine (Sargentodoxa cuneata), rattan palm, Amomun villosum and mixed grasses completely shade the ground surface with layer upon layer of green leaves. In this 200 acres of broadleaf mixed forest, we saw the beautiful prospect of restoring an excellent environment in Xiaoliang prefecture: as long as they persist in arduous struggle for a number of years, they have very good prospects of completely restoring the tropical forest.

Gratifying Results

During the 23 years of arduous struggle, Xiaoliang prefecture has undergone a fundamental change in its natural appearance, soil quality, climate and economic benefits, producing gratifying results. In the past, Xiaoliang was like a number of broken bricks cast into a wasteland, while today it has become an area of green. When one drives through here in an automobile, the atmosphere that comes to meet him is fresh and slightly moist. To the eye it already looks like a small forest. Among the mixed pine and eucalyptus forest, with a canopy density of 50 to 70 percent, soil erosion has dropped from 10,000 cubic meters per square km per year to 3,000; the soil moisture content has risen from less than 10 percent to a figure of 20 to 26 percent, and the soil humus content has been increased to about 3.58 percent. On sunny days in summer, the surface temperature in the forest is only 35° C, some 25.8° lower than on the bare, exposed ground, while the range of air temperature variation has decreased considerably. In both clear and rainy weather, the air in the forest has a relative humidity about 5 percent higher than on base, exposed ground. Of course, in the 200 mu of broadleaf mixed forest conditions are much better than here. The soil conservation station's forests and crops are worth about 2 million yuan, and since 1969 the income from forest and agricultural products has been more than 100,000 yuan, exceeding 180,000 yuan last year.

The soil and water conservation station has long been sending people to nearby communes to help train technical personnel and guide their afforestation work. The improvement in the climatic and soil conditions has controlled silting of farmland and provided the conditions for establishing fields with high and steady yields, so that the yield from the nearby production team's rice paddies have increased from an initial 100 jin per mu to 500-600 or even 800 jin per mu.

In the past there were no birds or insects here, but now that there is a forest, the birds come to it to build nests and raise their young. In the topsoil of the broadleaf mixed forests, worms were the first to appear. The following interesting event occurred: the station introduced a group of tree fern seedlings and they suddenly discovered large numbers of noctuids which only ate the tree fern leaves. While they were worrying about this group of seedlings, large numbers of tropical spiders arrived and spun their webs in the nearby trees, rapidly catching and eating all the noctuids, which saved the seedlings. This story may seem a bit unusual, but in reality it reflects the objective natural laws of the ecological balance: the noctuids eat the leaves and the spiders eat the noctuids, while the trees also provide the spiders with a living environment. Of course, if there had not initially been a certain area of forest, so that the spiders had long since been able to establish themselves, when the critical time of the noctuid infestation arrived the spiders would not have come to the rescue.

Xiaoliang Prefecture has undergone a natural change lasting a century or more, from forest to bare ground and from bare ground back to an initial manmade forest; this change was not spontaneous, but resulted from human activity. People in the past had no knowledge of science and cut the forests entirely down, exposing posterity to the revenge of nature and to a great deal of hardship. Now that we have the superior conditions of socialism, and have further grasped the secrets of the natural world, by relying on the force of human society we can restore some of the ruined natural environment. The changes in Xiaoliang confirm this point, and this is a valuable aspect of Xiaoliang's experience. But the time required has been too long and the cost too high. Accordingly, while we affirm and disseminate the experience of Xiaoliang, the lesson that past destruction of the forest resulted in long-term harm and loss should make us who live at the present time wiser and more respectful of nature's laws, and should make us recover the damaged natural environment in a planned fashion and never again permit the pernicious practice of wantonly cutting forests.

8480
CSO: 5000/4069

RUBING ARTICLE ON AFFORESTATION

SK130804 Jinan Shandong Provincial Service in Mandarin 2300 GMT 12 Jun 81

[Report on DAZHONG RIBAO 13 June article by Bai Rubing, provincial first secretary: "Exploit the Strong Points of Flatlands and Accelerate Afforestation"; article was originally published by ZHONGGUO NONGYE ZHAZHI [CHINA FORESTRY MAGAZINE]]

[Excerpts] The article focuses on three major issues: 1) Afforestation is important in controlling drought and waterlogging, preventing windstorms and preventing the soil from becoming sandy and alkaline; 2) it is important to ensure timber self-sufficiency: and 3) it is important for peasants to become prosperous.

The article states: There are 4.87 million mu of forests in the province's flatlands. Individuals and collectives in areas with a successful afforestation record are usually more prosperous than other areas. Some people say: If you want to become prosperous, plant trees. If you have more trees, you will have more grain, livestock and cash.

This not only reflects the law of nature but also the law of the economy. Thirty years of experiences--good and bad--have shown us that we must vigorously promote forestry. To promote forestry, we must understand the importance of forestry, eliminate the influence of leftist ideology, act according to the laws of nature and the economy and put forestry on a par with agriculture and livestock production. Leadership at provincial and prefectural levels on down should personally attend to forestry and help deal with the many problems in forestry development.

The article states: The goal of our afforestation drive is to achieve a 20 percent forest coverage rate by the end of this century. It now 9.2 percent. By then, the forest coverage rate in mountainous areas should be as high as 40 percent; in flatlands it should reach 15 percent.

CSO: 5000

PROGRAM COMBATING OIL POLLUTION IMPLEMENTED

Colombo SUN in English 30 May 81 p 10

[Text] Immense pollution of the East Asian seas is threatening the livelihood of millions of people inhabiting the coasts of the Asian countries washed by these seas.

These seas are the main sewer for all domestic and agricultural and industrial wastes. Rapid industrial growth and urbanisation has overloaded domestic waste collection and treatment systems, thus the wastes spewing into the sea are loaded with toxic effluents.

This has had serious consequences on the livelihood of people, particularly those who live in the coastal areas.

Toxic effluents entering the marine food chains endanger human health while the destruction of mangrove swamps has reduced the fish catch. This was clearly seen in Thailand when its rapidly developing marine fisheries during the 1960's suddenly stagnated. It was traced back to the destruction of the mangrove swamps.

In addition to this, oil slicks and industrial effluent is also destroying some of the world's most beautiful beaches ruining the tourist trade in these areas.

These problems have been viewed with concern by the heads of these countries and, in an attempt to arrive at something concrete for these countries with regard to the cleaning up of the seas, top government officials from the member states of the Association of South East Asian Nations met in Manila last month to draw an action plan for "Operation Clean-Up."

On oil pollution control, the action plan will launch a training programme for the prevention of oil spills. Joint investigations aimed at curbing operational pollution from ships will also be launched.

According to Filipino Dr Reynaldo Lesaca, Deputy Director of UNEP's Regional office, special attention will be given to managing domestic industrial and agricultural wastes through developing and applying principles and guidelines for discharging wastes into the coastal waters. Research will be carried out to find suitable methods of dealing with hazardous wastes.

It will also include the setting up of programmes for the safeguard of endangered marine species and the establishment of marine reserves to protect degraded coastal areas.

CSO: 5000

BRIEFS

AKHUNGTIEN STREAM POLLUTION--Pollution in Ahkungtien Stream in Kaohsiung County seriously threatens the aquatic life there, a report recently released by the Kaohsiung District Agricultural Improvement Station stated. The report said water life is affected, as well as grain and vegetable crops. This kind of pollution is caused by various factories, chemical, metal, dying, fibre, sugar making, and food processing plants dumping wastes along both sides of the stream. The degree of pollution is so serious that the river water has turned pitch black in color and stinks. Garbage and foam as well as oil are found in the stream, the report stressed. Rice paddies near this area are almost barren as a result of using this water for irrigation. The report pointed out that during the first crop period, the lack of rain water or other sources of supply lead to farmers' using the polluted water on their crops. Laboratory tests have shown that oxygen is absent in water, especially downstream. In other words, aquatic life can not live because of the lack of oxygen. What is worse, rice and other grains absorb the polluted water, rich in chemicals and metallic elements, and in turn will poison people who eat them. The report urged the authority concerned to act quickly to prevent further pollution of Ahkungtien Stream. [Text] [Taipei THE CHINA POST in English 28 May 81 p 12]

ISLAND RIVER POLLUTION--The Anti-Water Pollution Center of the Taiwan Provincial Government after making regular analyses on the water in 35 rivers around the island announced that only ten of them are not polluted; four rivers are slightly polluted, eight of them are quite polluted while the remaining 13 are seriously polluted. In the group of seriously polluted rivers, the worst are the Tamsui River, the lower reaches of the Hsintien Chungkang, Wu and Putzu Rivers, and the lower and middle sections of the Chishui and Houchin Rivers. The center pointed out that water pollution is mostly caused by humans, who directly or indirectly cast pollutants into the rivers and cause physical or chemical changes in the water and change the ecology of the river. Everyone is a victim of water pollution, said the center which urged the public to cooperate with it in preventing pollution of the island's rivers. [Text] [Taipei THE CHINA POST in English 22 May 81 p 12]

CSO: 5000

BRIEFS

ANTIPOLLUTION MEASURES IN SLOVAKIA--Antipollution equipment which will be installed at enterprises under the SSR Ministry of Industry, as well as other measures implemented during 1981-1985, will reduce emission of solid pollutants 20 percent compared with the 1980 figures. However, in spite of this effort, 44,000 tons of solid pollutants, over 38,000 tons of this ashes, will be emitted by the industry in 1985. [Bratislava PRACA in Slovak 1 Jun 81 p 2]

CSO: 5000/3010

GUYANA

BRIEFS

ENVIRONMENTAL POLICY GROUP--The Environment and Water Supply Minister in collaboration with other state agencies is now engaged in drafting a National Environmental Policy. When completed it will mean that all aspects related to the environment will be under the control, and direction of the Ministry. Set up in January the Ministry is one of a number of newly created Government departments. The decision came out of a three-hour meeting at the Ministry's board room and the NEC would assist the Ministry in the execution of its policies. However, the constitution and type of representation of the council is to be looked at shortly. In addition a state paper outlining the objectives, plans and recommendations of the Ministry is to be presented to Cabinet in a few weeks. Thereafter it is expected to be taken to Parliament for legislation. Minister Joshua Chowritmootoo who chaired the meeting, made it clear that the Environmental Council would be a legally constituted body "so as to give it the necessary clout to execute environmental policy." Factors such as proper drainage in the country, air, water, noise pollution, sewerage and garbage disposal were all discussed in detail. [Excerpt] [Georgetown GUYANA CHRONICLE in English 9 May 81 p 1]

CSO: 5000

CRITICAL COASTAL EROSION PROBLEM AT KETA

Accra GHANAIAN TIMES in English 6 Jun 81 p 8

[Text] Mr Peter Ala Adjetey (UNC Kpeshie), yesterday suggested that the sea erosion problem facing Keta and other areas should be treated as a matter of national policy.

Mentioning the other areas, Mr Adjetey said "today, it is Keta, tomorrow it will be Ada, Shama, Labadi and the old Winneba Road along the Korle Gonno beach in Accra".

He was contributing to a motion by Mr L. P. Tosu (UNC Keta), asking the House to approve the report of the Parliamentary delegation to the Netherlands on the Keta coastal erosion and protective measures.

Supporting the motion, Mr Adjetey, who is the UNC Parliamentary Leader, said though the problem was everywhere, "it is more accentuated in Keta than anywhere else".

The situation, he said, called for attention.

Moving for the approval of the report, Mr Tosu, who was the leader of the delegation, told the House of the readiness of the Netherlands government to assist in finding a solution to the problem.

He disclosed that after critical discussion between the delegation and officials of the Directorate of the International Technical Assistances of the Netherlands Ministry of Foreign Affairs, the officials agreed to persuade their government to construct three of the 30 experimental groynes as aid to the Ghana government on the condition that Ghana finds aid for the construction of the remaining 27.

Seconding the motion, Mr Kwadwo Ofori Kuragu (PFP Afigya Kwabre), warned against delay in taking decision on the Keta coastal erosion problem.

"The more the delay the more expensive the project" he added.

Calling for a critical look at the Keta problem, Mrs E. Ame[illegible] Williams (INP Ada), said her constituency faced a similar problem.

Members who caught the Speaker's eye to speak on the motion called for action to save Keta.

CSO: 5000/5024

BRIEFS

DANGEROUS FISHING WITH DDT--A fisherman has stressed the danger of using the "DDT" insecticide in fishing and called on the government to take immediate steps to halt the practice. Mr Alex Sogah, chief fisherman of the Kwame Danso area in Brong-Ahafo Region, told the Ghana News Agency in Kumasi that certain fishermen along the Volta Lake in the region were using insecticide in fishing despite protests from a local chief and other fishermen in the area. Mr Sogah warned that unless the practice was halted, a quarrel similar to that which broke out between the Gonjas and Kafamba last year, could occur. He alleged that although four fishermen were arrested for using the insecticide in fishing and handed over to the police, they were later set free. He condemned the practice, saying "this quick method of getting money without considering the health of the people must cease". [Text] [Accra GHANAIAN TIMES in English 25 May 81 p 5]

ASSISTANCE IN SEA EROSION PROBLEM--A Yugoslav construction firm, 'Pomgrads', is expected in the country soon to complete work on the sea defence wall along the Sekondi-Takoradi littoral to save the area from further erosion. This was disclosed by the Western Regional Minister, Mr Sam Cudjoe, during an inspection tour of the area with officials of the Ghana Highway Authority and press at Ngyirisia, Bakano and Nkontompo, all in the Sekondi district at the week-end. Mr Cudjoe pointed out that after the completion of the Sekondi-Takoradi project, the contractors would undertake similar projects in areas like Dixcove and Axim which are also being threatened with sea erosion. The Regional Minister, however, regretted that the contractors would have completed these projects during the first Republic, had work not been abandoned after the 1966 coup. Mr Cudjoe noted that the ravages of the sea had come about as a result of the construction of the break-waters at the Sekondi Naval Base. The sea had eroded half of Sekondi-Takoradi-Cape-Coast road at Ngyirisia, rendering it immotorable and necessitated a diversion through Kojokrom for the past two weeks. [Excerpt] [Accra GHANAIAN TIMES in English 26 May 81 p 8]

CSO: 5000/5024

URAL-BIOSPHERE PROGRAM DISCUSSED

Moscow KRASNAYA ZVEZDA in Russian 21 Apr 81 p 4

[Article by Yu. Cherezov, turret lathe operator of the Chelyabinsk Tractor Plant imeni V. I. Lenin, Hero of Socialist Labor and Deputy to the RSFSR Supreme Soviet: "The Urals as a Biosphere"]

> "Due to the exceptional scientific significance of the Il'meny Mountains in the Southern Urals near Miassa and to protect their natural mineral resources, the Council of Peoples Commissars decrees: give the Peoples Commissariat the right of instruction to designate individual sections of the Il'meny Mountains in the Southern Urals near Miassa as a state mineralogical reserve, i.e., as a national treasure intended exclusively for performing the scientific and scientific and technical tasks of the country." (signed) V. Ul'yanov (Lenin), Chairman of the Council of Peoples Commissars.

These words are inscribed at the base of the memorial to V. I. Lenin, erected near Chelyabinsk where the well-known Il'meny State Game Reserve imeni V. I. Lenin begins. The enormous scientific importance of the Il'meny Mountains and the mountains found there that have brought Il'meny workers world renown, has been noted in the works of prominent Russian scientists--A. P. Karpinskiy, N. I. Koshkarov, P. V. Yeremeyev, I. V. Mushketov and others. After all, approximately 200 types of minerals, including the world's first discovered ilmenite, chevkinite and samarskite, are concentrated in the comparatively small area of the reserve.

This document, according to which the Il'meny reserve was created that has now become a large complex nature conservation scientific research institution of the Urals scientific center, was signed as early as 1920. From the first days of Soviet power, problems of environmental protection were posed in our country in the most important state tasks.

Following Lenin's testaments, the party and government subsequently adopted many decrees directed toward environmental protection and efficient use of its resources in the interests of the national economy. Last year alone, the USSR Supreme Soviet adopted the laws "Protection and utilization of the animal world" and "Protection of the atmosphere." The section "Environmental protection" of the "Main Trends for Economic and Social Development of the USSR for the Period 1981-1985 and for the Period up to 1990 is yet another clear confirmation of the fact that our natural resources have become the subject of the constant concern of the party and of every Soviet person. The state is allocating enormous funds to measures for environmental protection.

Problems of environmental protection are extremely important for the oblasts of the industrial Urals. Realization of one part of the complex program for intensification of the industrial production of the region--the "Urals biosphere" subprogram will help to solve them. Scientists-biologists must evaluate the consequences of the intensified effects of man and nature, must thoroughly study the ecology of plants and animals and microorganisms and finally prepare recommendations on environmental protection and especially valuable and rare species of flora and fauna.

It is understandable that problems of environmental protection are extremely important for the oblasts of the industrial Urals. A good base was created during the 10th Five-Year Plan for further improvement and increasing the effectiveness of environmental protection measures. For example, approximately 3,500 hectares of lands disturbed by strip mining in Chelyabinskaya Oblast were returned to economic circulation due to state funds alone. This work is being continued successfully during the 11th Five-Year Plan.

Special attention is devoted to protection and efficient use of the water resources in the region. During the past 5 years, 112 water-protected facilities have become operational in our oblast alone. This made it possible to reduce the discharge of unpurified waters by 127,000 cubic meters per day. At the same time, active work is being carried out at enterprises to develop a system of circulating water supply. These systems will appear during this five-year plan at the Chelyabinsk Electro-Metallurgical Combine, the Chelyabinsk Electrode Plant, the Ufaleyskiy Nickel Combine and at the Satka Combine Magnezit. Extensive work remains on introduction of low-waste technology at the industrial enterprises of the Urals and also on reprocessing of accumulated wastes of value to the national economy.

And how important concern about the forests is! We do not for a minute have the right to forget that everything is interrelated in nature. Thus, clear cutting of forests in the watersheds of rivers sharply reduces the reserves of surface and ground waters. At the same time sanitary cutting of a forest without which it would die is extremely necessary. In short, the problem of environmental protection requires a universal, complex and scientific approach.

It is known that as much oxygen as would be required for the respiration of 10 persons during an entire year is consumed when a ton of coal is burned. In travelling 1,000 kilometers, an automobile takes as much oxygen from nature as one person would require for a year. Four cubic meters of pulp wood are required to manufacture one ton of paper.

All this--both oxygen and wood and much, much more--is provided by the forest, ready at any time to reward us with the joy of communicating with nature. We do not have the right to forget this. Lenin left us the bequest of conserving nature.

6521
CSO: 5000/25

BAYKAL POLLUTION CONTROL MEASURES REVIEWED

Moscow PRAVDA in Russian 28 Apr 81 p 3

[Article by V. Moskvitin, chief of Administration of Hunting and Commercial Management attached to the Buryatskaya ASSR Council of Ministers, Ulan-Ude: "Enrich Lake Baykal"]

> [Text] "Continue the work on protection and efficient use of unique natural complexes and primarily of the Baykal," is envisioned by the Main Trends adopted by the 26th CPSU Congress. It is difficult to overestimate the significance of the forthcoming work in this regard. And how will it be fulfilled?

Answering this question, it should be noted that much has been done during the past decade in the Buryatskaya ASSR to intensify the protection and efficient use of the animal world. We have two state game reserves (the Barguzin and Baykal) and 29 state game reserves of local and one of Russian significance functioning on an area of approximately two million hectares. A total of 17 state cooperative commercial-hunting facilities is involved in protection and efficient use of natural resources. Thirteen registered hunting preserves that have one million hectares at their disposal have been organized. Effective protection and implementaton of biotechnical measures are fruitfully reflected in an increase of the population of wild animals.

Buryatiya is the native area of the well-known Barguzin sable. The autonomous republic is a stable supplier of commercial furs. It successfully fulfilled the plan of the 10th Five-Year Plan on the sale of "soft gold" to the state. The life of remote taiga villages of the northern Transbaykal was altered significantly with construction of the Baykal-Amur Mainline Railroad. New modern cities and villages are arising in previously empty places. Four state game reserves on which any kind of hunting is prohibited have been organized to protect the fauna in the railway construction zone.

At the same time industrial development of the taiga territories of the northern republic and an increase of population lead to a significant reduction of hunting lands. Construction of the mainline cannot but help affect the operating conditions of commercial hunting farms and the entire natural complex of the region.

First, the migration routes of elk and reindeer from winter to summer pastures and return are being disrupted, which leads to a change in the distribution of the animals by seasons. The danger of forest fires is increased. Cases of poaching also become more frequent with an increase of population. All this requires adoption of urgent effective measures.

Under these conditions it is important to ensure protection not only of the animals themselves but also of their habitat. Thus, the timber procurement organizations in the zone of the mainline are creating forestry management farms, although the timber reserves are limited here, and cutting them with the high deposition of sandy soils will cause erosion and will subsequently make reforestation difficult. This is being discussed with alarm at the Ministry of Forestry of the republic.

Visiting regions of BAM [Baykal-Amur Mainline Railroad] construction, one recognizes that a comprehensive approach is required to protect the animal habitat. There is a need to scientifically base the distribution of the network of environmental protection areas for the future. The scientific and technical council of our administration, with the participation of representatives of other organizations, considered the problems of creating an efficient distribution of environmental protection areas in Buryatiya--game reserves and wildlife preserves--up to 1990 for this purpose.

The council recommended that an ornithological game reserve be organized on the basis of the Kaban Republic Wildlife Preserve to study the ornithological fauna of the Selenga River delta, that the area of the Barguzin Game Reserve be expanded and that the local Altacheyskiy Wildlife Preserve be transformed to a republic (RSFSR) wildlife preserve. It is planned to organize an additional 10 wildlife preserves and an extensive network of reproduction sections and to bring the specially protected area up to 10 percent of the total area of the republic. This in combination with other measures will make it possible not only to conserve but also to efficiently utilize natural resources.

Especially important is organization of an ornithological reserve in the Selenga River delta. Aquatic birds play an important role in the natural complex of the Baykal. Considerable seasonal concentrations of them during migration and nesting in the region of the Selenga delta, which occupies approximately 70,000 hectares, will leave a significant impression on the entire Baykal. No fewer than 80 percent of the birds of the Baykal area nest in the delta. Favorable feeding and protective conditions--an abundance of fish and aquatic insects, the presence of a large number of islands, shallow tributaries and lakes grown over with thick vegetation--make the river delta one of the main points of concentration of aquatic animals of all Eastern Siberia. The population of feathered animals during spring and fall migrations is especially high.

As we can see, many problems must be solved to maintain the purity of both the "glorious sea" and the excellent, but very easily damaged points surrounding it and the animal world of the Baykal area. We hope that the RSFSR Council of Ministers and the Council of Ministers of the Buryatskaya ASSR and also the main administration of hunting management and game reserves attached to the RSFSR Council of Ministers will devote attention and provide specific assistance in this. Only with their interested participation can scientifically justified measures be worked out an implemented that guarantee the conservation and efficient use of these natural complexes.

6521
CSO: 5000/25

AIR POLLUTION MEASURES IN REPUBLIC EXAMINED

Tallinn SOVETSKAYA ESTONIYA in Russian 10 May 81 p 4

[Article by A. Gromov, Chief of Estonian Regional State Gas Purification Inspectorate: "For Purity of the Air Basin: A Month's Campaign for Environmental Protection"]

[Text] Section 9 is devoted to environmental protection in the Main Trends for Economic and Social Development of the USSR for the Period 1981-1985 and for the Period up to 1990. This again indicates what important attention the party is devoting to solution of problems related to protection of the natural environment.

Much was done during the 10th Five-Year Plan in the republic to reduce noxious discharges and to purify the republic's air basin. For example, a reduction of noxious discharges into the atmosphere was achieved at Kokhtla Yarva by closing an obsolete plant in the Association Slantsekhim and the shale-chemical plant Kiviyli and also due to construction of electric filters at the TETs Akhtma.

A number of measures has been implemented that are directed toward purification of the air basin in Tallinn as well. Thus, wet electric filters to trap sulfuric acid mist were installed at the Maardu Chemical Plant and it is being converted to burn gas instead of mazut. The shale dust trapping system has been redesigned at the Myanniku Boiler Plant of the Silikat Association and introduction of absorbers and hot regeneration at the pulp and paper combine imeni V. Kingisepp made it possible to reduce the discharge of sulfuric anhydride into the atmosphere. Much has also been done at other enterprises.

However, a number of measures planned for the 10th Five-Year Plan to reduce noxious discharges into the atmosphere were unfortunately not fulfilled. This is primarily true of such republic enterprises as Slantsekhim, the shale-chemical plant Kiviyli, the cement plant Punane Kunda and the Pribaltiyskaya GRES.

It is stated in the Main Trends: "Improve production processes to reduce discharges of noxious materials into the atmosphere and improve purification of waste gases of impurities and increase the output of highly efficient gas-trapping devices."

What is planned in the future in the republic in light of these requirements on protection of atmospheric air against industrial pollution?

First, it is of course necessary to immediately fulfill all the previously planned, but not yet fulfilled, measures. Specifically, this concerns replacement or reconstruction of obsolescent electric filters of the cement plant Punane Kunda and the Pribaltiyskay GRES.

Important attention should be devoted to the enterprises of the shale basin. Thus, electric filters must be installed at the TETs Kokhtla-Yarva (as previously at the TETs Akhtma) for the second stage of purifying flue gases of shale ash and a complex of air-protection measures should be implemented at Slantsekhim and the plant Kiviyli.

Noxious discharges into Tallinn's air basin should be reduced significantly during the next few years It is planned to close the sulfuric acid and to install a sanitary absorber as the second stage of purifying the waste gases of the superphosphate plant at the Maardu Chemical Plant and gasification of the plant's burner facilities will be continued.

The boiler plant at Myanniku at the Association Silikat should be converted to gasmazut fuel; the foundry at the plant Vol'ta and the Machine Building Plant imeni I. Lauristin will be redesigned and furnaces will be eliminated. It is planned to accelerate elimination of small boiler plants throughout the city due to central heating of municipal regions and conversion of individual boiler plants to burn more "noble" fuels.

Much still remains to be done, but the prospects for purifying the republic's air basin of industrial discharges are good. Success depends on the ministries, agencies and enterprises which have been called upon to strictly fulfill the requirements established by USSR law "On protection of atmospheric air."

6521
CSO: 5000/25

CALL FOR PROTECTION OF THE BIOSPHERE IN UKRAINE

Kiev PRAVDY UKRAINY in Russian 13 May 81 p 2

[Article by Ye. Kondratyuk, Corresponding Member of the Ukrainian SSR Academy of Sciences; S. Stoyko, Doctor of Biological Sciences; and V. Voloshin, Candidate of Economic Sciences: "Reliable Protection of the Biosphere: Problems and Opinions"]

[Text] The nature of our republic is rich. We have something to love,and there is something to protect for the present and future generations. Reserves, numerous wildlife preserves, a nature park and game reservation-hunting farms have been created to preserve for them the uniqueness of various aspects of our nature. And how many natural monuments and reserve landmarks there are! The work to create nature reservations will be continued. The decisions of the 26th CPSU Congress direct us toward this. It is pointed out in the Main Trends: "Continue formation of a scientifically based network of reserve areas and national parks and conduct a study of natural systems and facilities based on them."

The state nature preserve fund should not only contribute to passive conservation of natural resources but should also fulfill the functions of active protection of nature. The time has come in this regard to determine a new category of territorial reserve complexes--biosphere reserves. The idea of creating these complexes was born in 1973 in the Coordinating Committee of UNESCO "Man and the Biosphere."

Seven biosphere reserves has been created in our country during the first step: Berezino, the Caucasus, Sary-Chelek, Sikhote-Alinskiy, Prioksko-terrasnyy, Repetekskiy and the Central Chernozem. Their total area is 775,000 hectares. It is planned to bring the number of biosphere reserves up to 24 and their area up to 3.2 million hectares in the near future.

Biosphere reserves include not only virgin natural complexes but also areas in the sphere of active economic development and even altered and degraded lands.

Unfortunately, biosphere reserves have still not been created in our republic. At the same time it is appropriate to recall that intensive economic activity has become the main cause of the fact that more than 150 species of plants and 85 species and subspecies of animals have already been entered in the Red Book of the Ukrainian SSR. Much land has been subjected to water and wind erosion,and the air basin has been polluted in a number of industrial regions and large cities.

Biosphere reserves in the Ukraine can be organized on the basis of existing state game reserves and also nature (national) parks that have been confirmed and planned. The network of these game reserves should reflect the natural conditions of the main natural and geological zones of the republic and should contribute to solution of the most important ecological problems.

Scientists of the republic considered the scientific principles of creating a network of biosphere game reserves in the Ukrainian SSR in January 1981 at a meeting of the National Committee of the Ukrainian SSR on the UNESCO program "Man and the Biosphere." It has been recognized that the following game reserves can be organized during the 11th Five-Year Plan: the Donetsk steppe (Based on the Lugansk State Game Reserve), the Black Sea (based on the Black Sea Game Reserve with water surface of 100 square kilometers in the Tendrovskiy Zaliv and along the coastal dry valley sections and islands and also the steppe game reserve, botanical park and Askaniya-Nova acclimatization zoological park), the forest-steppe (based on the Kanev Game Reserve), the Polessk (based on the Polessk State Game Reserve in Zhitomirskaya Oblast) and the Carpathian (based on the Carpathian State Game Reserve and the Carpathian Nature Park).

There is no doubt that this requires further improvement of all the principles of game reserve management in the republic. The existing game reserves are subordinate organizationally to different agencies. For example, the Steppe, Black Sea, Lugansk and Karadag are subordinate to the Ukrainian SSR Academy of Sciences; the Askaniya-Nova is subordinate to VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin]; the Kanev is subordinate to the Kiev State University, Ministry of Higher and Secondary Specialized Education of the Ukrainian SSR; the Polessk reserve is subordinate to the Ukrainian SSR Ministry of Forestry, and the Carpathian reserve is subordinate to the Ministry of the Timber and Woodworking Industry, Ukrainian SSR. This agency dispersion does not create the appropriate conditions for complex and purposeful work to implement effective measures of environmental protection in the republic.

There is a need to subordinate the indicated game reserves to a single state body--the Ukrainian SSR State Committee for Environmental Protection--and to entrust scientific and methodical management of research work of game reserves to the Ukrainian SSR Academy of Sciences.

We also feel that the functions of managing the activity of future biosphere game reserves of the republic can also be entrusted to the Ukrainian SSR State Committee for Environmental Protection. This will permit strengthening of their role and significance as an effective means of monitoring the consequences of the effect of production activity on the natural environment. We recall that "improvement of state management and intensification of control in the field of the use of nature and environmental protection" was provided by the "Main Trends for Economic and Social Development of the USSR for the Period 1981-1985 and for the Period up to 1990, confirmed by the 26th CPSU Congress.

As standards of nature, biosphere game reserves should become an important means of study and forecasting of this effect and preparation of scientific recommendations on further optimization of the relationships of developed socialist society and nature and of creating a high-quality living environment for the Soviet people.

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AGRICULTURE MINISTER COMMENTS ON U.S. ENVIRONMENT POLICY

Stockholm DAGENS NYHETER in Swedish 9 Jun 81 p 9

> [Text] President Ronald Reagan's decision to reduce demands on U.S. industry for environmental protection was strongly criticized by Sweden's Minister of Agriculture Anders Dahlgren. Sweden is making a powerful contribution against pollution of the air and earth by inviting 33 countries' environmental ministers to a conference next year in Stockholm on acid contamination.

"I am very disappointed with President Reagan's decision to reduce environmental requirements on industry for economic reasons. It is unfortunate that a rich industrial country such as the United States reduces environmental requirements in a recession in order to increase industry's sales.

"Reagan's environmental policies are very bad for the Third World, among others. How can the poor underdeveloped countries see themselves as being able to afford environmental protection if the United States can not?"

Sulfur Halved

"Acid contamination is our greatest environmental problem. The main cause is the enormous burning of coal and oil in Europe," said Anders Dahlgren.

Sweden has before it the thankless task of halving sulfur emissions in this country by 1985. In 1975 the emissions were 800,000 tons per year, of which 600,000 came from the burning of oil and the rest from industry. The goal is to reduce the emissions to 100,000 tons from industry and 300,000 tons per year from oil by 1985.

If that goal is reached, and Dahlgren believes that it will be, it will be a modest improvement in spite of everything. That is because 75 percent of the sulfur which pollutes Swedish nature results from emissions from England and the Continent.

"But reduced emissions within Sweden mean much for the environment near the sources. Furthermore, reduced emissions in Sweden will mean less acid seas and earth in Finland and the Soviet Union. The fact that Sweden has strict requirements for environmental protection facilitates negotiations with other countries," said Anders Dahlgren.

"Sweden, the United States and Japan have the strictest requirements governing exhaust emissions from automobiles. Switzerland has now followed Sweden's example in Europe, and I am convinced that other European countries will gradually follow along.

"I have visited my colleague Gerhart Baum in West Germany. It is my definite impression that in West Germany they have become much more aware of environmental problems than previously."

Miljo-82 [Environment-82]

"The problem with countries in the EC is that they must arrive at common rules. Within the EC there are countries which recognize that Sweden's view of the environment is correct. But there are also countries which regard environmental protection as an unnecessary expense for industry."

Miljo-82 is the name of the conference in Stockholm in which 33 nations will participate. The week before midsummer of next year there will be two parallel conferences of experts with 50 participants in each. One will be held on Lidingo and one at Saltsjobaden. The week after midsummer the conference of politicians will be held. The participants will come from both the East and the West. In addition to the main theme of the conference, the problem of the threatened ozone layer will be discussed.

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